PART IV

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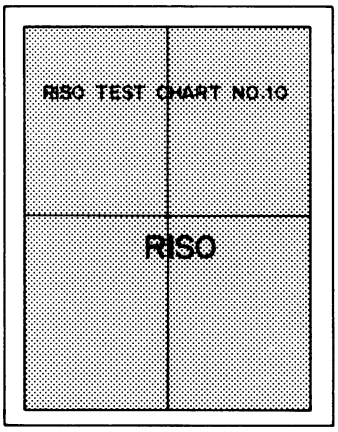
TROUBLE SHOOTING (With Image Samples)

Signal or Slice Level	Standard Voltage	TP	VR		Copy Image
(1) CCD Video Signal ① Basic Black Level Voltage	Approx. 0V	TP10	VR6 (Image Scann.)	High	Lighter image → **Fig. 1**
				Low	Darker image → **Fig. 2**
② Gain Voltage	Approx. 3.0 V	TP10	VR7 (Image Scann.)	High	Lighter image → **Fig. 1**
				Low	Darker image → **Fig. 2**
(2) Image Signal ① Basic Black Level Voltage	3.5V	TP7	VR8 (IT・I/O)	High	Darker image → **Fig. 2**
				Low	Lighter image → **Fig. 1**
② Gain Voltage	1.7V	TP7	VR7 (IT・I/O)	High	Darker image → **Fig. 2**
				Low	Lighter image → **Fig. 1**



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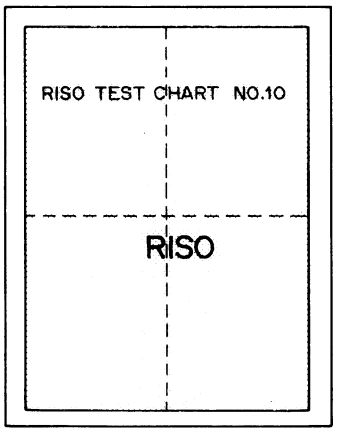
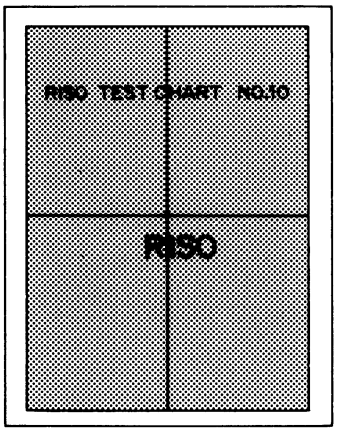
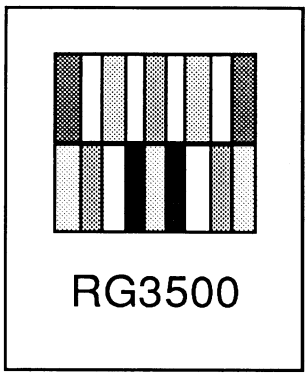


<Fig. 1>



<Fig. 2>

(3) White Peak Slice Level	2.0V	TP3	VR4 (IT・I/O)	High	Increase white area on Photograph image. → **Fig. 3**
				Low	Decrease white area on Photograph image. → **Fig. 4**



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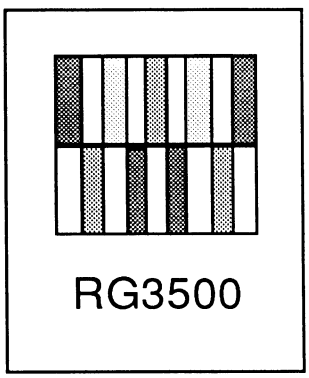
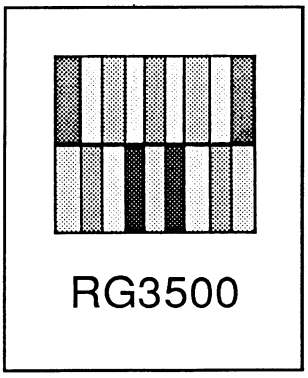
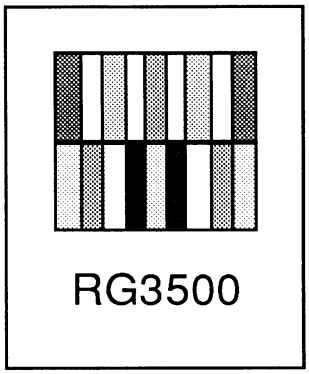


<Fig. 3>



<Fig. 4>

Signal or Slice Level	Standard Voltage	TP	VR		Copy Image
(6) Edge Stress Slice Levels			VR5 (IT · I/O)	Wide	Character on photograph becomes fuzzy. → **Fig. 9**
				Narrow	Black dots or big solids come into view in half-tone area. → **Fig. 10**



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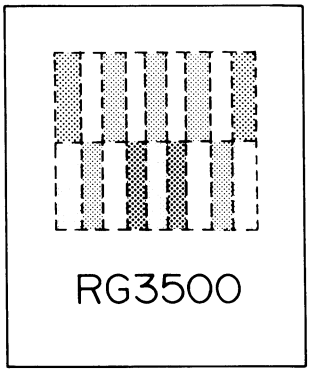
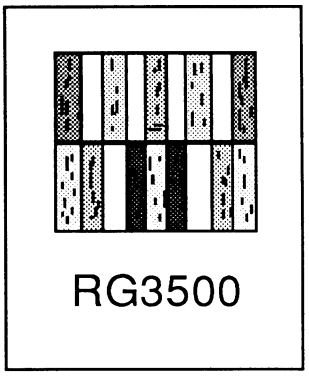
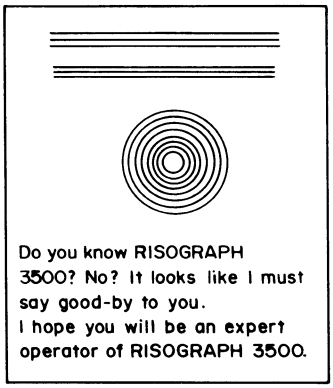


<Fig. 9>



<Fig. 10>

(7) Line-copy Mode Slice Level	2.6V	TP5	VR1 (IT · I/O)	High	Image becomes lighter. Small characters and thin lines break. → **Fig. 11**
				Low	Image becomes darker. Characters and lines become heavy. → **Fig. 12**



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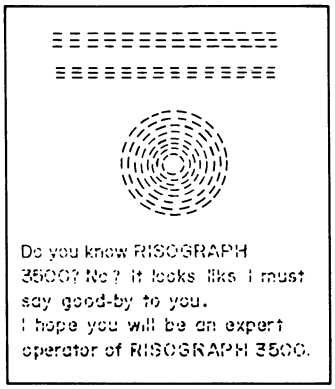
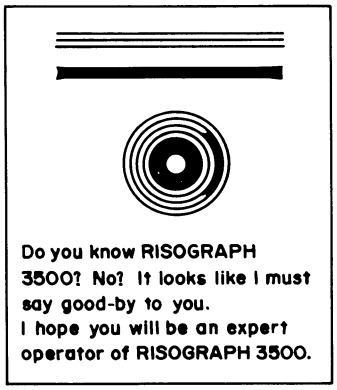
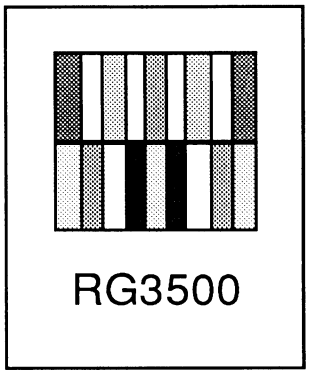


<Fig. 11>



<Fig. 12>

Signal or Slice Level	Standard Voltage	TP	VR		Copy Image
(6) Edge Stress Slice Levels			VR5 (IT · I/O)	Wide	Character on photograph becomes fuzzy. → **Fig. 9**
				Narrow	Black dots or big solids come into view in half-tone area. → **Fig. 10**



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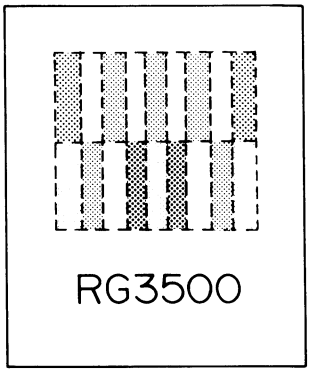
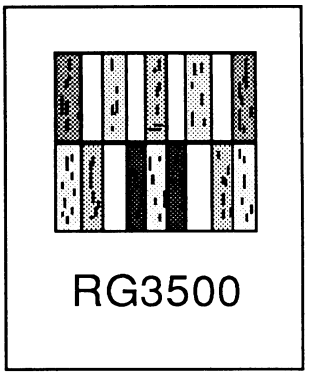
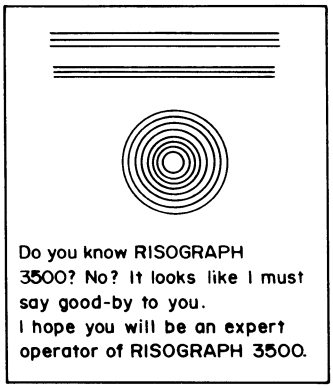


<Fig. 9>



<Fig. 10>

(7) Line-copy Mode Slice Level	2.6V	TP5	VR1 (IT · I/O)	High	Image becomes lighter. Small characters and thin lines break. → **Fig. 11**
				Low	Image becomes darker. Characters and lines become heavy. → **Fig. 12**



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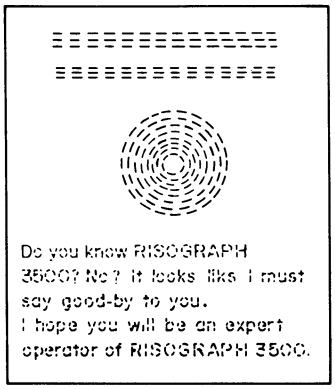
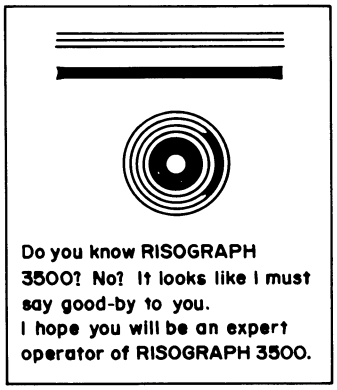


<Fig. 11>



<Fig. 12>

REFERENCE

1. REDUCTION FUNCTION

RG3500 is provided with a 3-step reduction function (**93%, 82%, 71%** [**93%, 75%, 64%** for the U.S. market]).
RG3500 has two different systems as explained below for reducing in the main and sub-scanning directions.

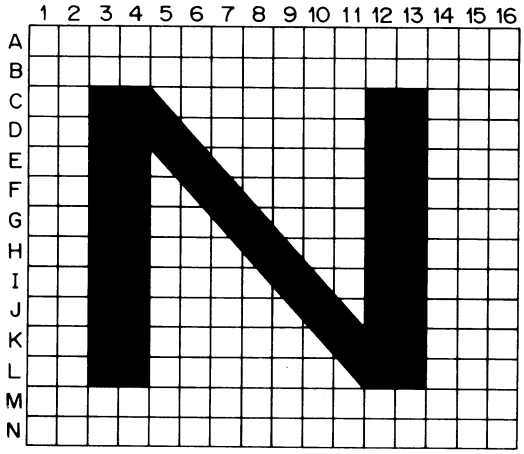
1) Reduction in the main scanning direction

A method called **"thinning-out"** is employed for reducing in the main scanning direction.

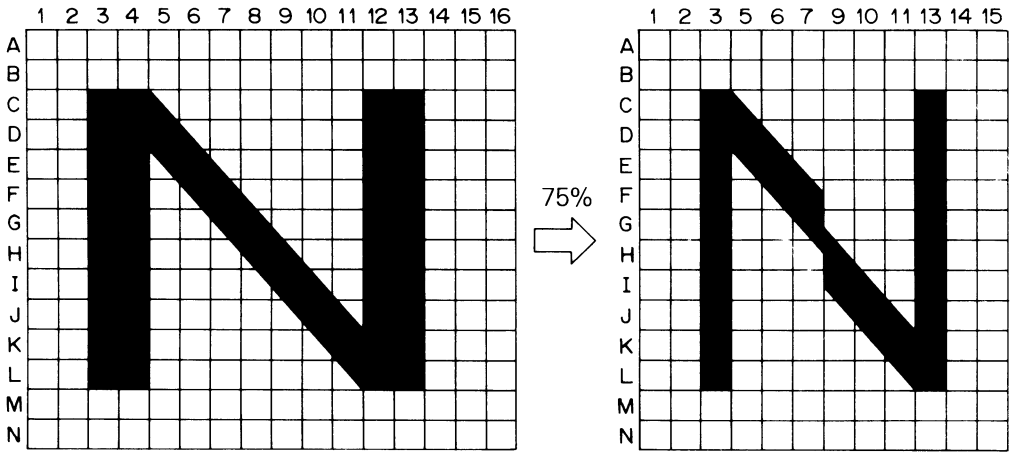
This **"thinning-out"** method thins out the CCD Image Signals in order to reduce the image. The reduction ratio can be changed by varying the **"thinning-out"** ratio.

The **"thinning-out"** method is explained in the following with the help of illustrations.

Now reduce the figure to the right by **75%**. Simply speaking, the reduction of this ratio is possible by thinning out at a ratio of 1 dot out of 4.



That is, dots in columns No. 4, 8, 12 and 16 in the figure on the previous page are thinned out. By this **"thinning-out"**, the figure on the previous page can be reduced by **75%** as shown in the figure below.



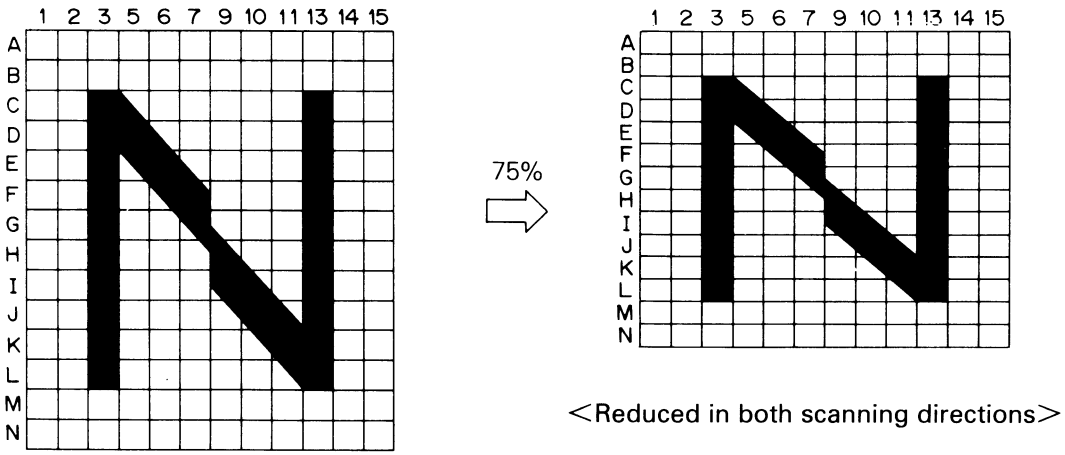
<Original> <Reduced>

To reduce by ratios other than 75%, the intended reduction is obtainable by combining two or more **"thinning-out"** processes at different **"thinning-out"** ratios.

※ For instance, a **71%** reduction ratio is obtained by combining '1 dot thinning-out process out of 4 dots (= **75%**)' and '1 dot thinning-out process out of 3 dots (= approx. **66%**)'.

2) Reduction in the sub-scanning direction

This reduction is done by varying the rotating speed of 'Read Pulse Motor'. The figures below show a **75%** reduction by this method.



<Reduced in the main scanning direction>

<Reduced in both scanning directions>

2. SERVICEMAN MODE

When the power switch is turned ON with the "✱" button and "C" button kept pressed, the following display appears.

[SERVICEMAN MODE: ELEVATOR]

In this condition, the elevation of "Paper Feeding Table" is in the check mode. By pressing the table release button together with the **"Lower Limit SW"** or **"Safety SW"**, the Paper Feeding Table ascends.

NOTE:
Other serviceman modes incorporated in RG2700 have been all removed from RG3500.